Search History

DATE: Friday, April 12, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB; PLUR=YES; OP=ADJ			
L8	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$) same (cell$)	133	L8
L7	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$) same (cell$ or combination or combin$)	137	L7
L6	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$)	209	L6
L5	L4 same nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$)	9	L5
L4	(endothelial) same (progenitor$ or stem)	926	L4
L3	(ec or endothelial) same (progenitor$ or stem)	1037	L3
L2	L1 and (ec or endothelial) same (progenitor$ or stem)	1	L2
L1	isner-jeffrey$	14	L1

END OF SEARCH HISTORY

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Your wildcard search against 2000 terms has yielded the results below

Search for additional matches among the next 2000 terms

Search Results -

Term	Documents
ENDOTHELIAL.USPT,PGPB.	13645
ENDOTHELIALS.USPT,PGPB.	5
PROGENITOR$	0
PROGENITOR.USPT,PGPB.	3659
PROGENITORACEAE.USPT,PGPB.	1
PROGENITORCELLS.USPT,PGPB.	1
PROGENITORS.USPT,PGPB.	1766
"PROGENITORS-CD34.SUP.+".USPT,PGPB.	1
PROGENITORS-COLONY.USPT,PGPB.	4
PROGENITORS-FROM.USPT,PGPB.	1
PROGENITORS-HUMAN.USPT,PGPB.	1
. . . . .	
FACTOR$(FACTOR-WAVELENGTH).USPT,PGPB.	pickup term
((ENDOTHELIAL) SAME (PROGENITOR$ OR STEM) SAME (NUCLEIC) SAME (FACTOR$ OR LYMPHOKINE$ OR CYTOKINE$ OR FACTOR$)).USPT,PGPB.	8

There are more results than shown above. Click here to view the entire set.

Database:
- US Patents Full-Text Database
- US Pre-Grant Publication Full-Text Database
- JPO Abstracts Database
- EPO Abstracts Database
- Derwent World Patents Index
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Search: L9

Refine Search

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Search History

DATE: Friday, April 12, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB; PLUR=YES; OP=ADJ			
L9	(endothelial) same (progenitor$ or stem) same (nucleic) same (factor$ or lymphokine$ or cytokine$ or factor$)	8	L9
L8	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$) same (cell$)	133	L8
L7	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$) same (cell$ or combination or combin$)	137	L7
L6	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$)	209	L6
L5	L4 same nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$)	9	L5
L4	(endothelial) same (progenitor$ or stem)	926	L4
L3	(ec or endothelial) same (progenitor$ or stem)	1037	L3
L2	L1 and (ec or endothelial) same (progenitor$ or stem)	1	L2
L1	isner-jeffrey$	14	L1

END OF SEARCH HISTORY

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Search Results - Record(s) 1 through 2 of 2 returned.

☐ 1. Document ID: WO 200192543 A2

L10: Entry 1 of 2 File: DWPI Dec 6, 2001

DERWENT-ACC-NO: 2002-114355
DERWENT-WEEK: 200218
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Transfecting confluent cells with nucleic acid for gene therapy or gene vaccination, comprises contacting the cells with a receptor-targeted vector having the nucleic acid and an agent that disrupts cell-cell junctions

INVENTOR: HART, S L

PRIORITY-DATA: 2001US-287410P (May 1, 2001), 2000GB-0013089 (May 30, 2000), 2000GB-0013090 (May 30, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200192543 A2	December 6, 2001	E	111	C12N015/63

INT-CL (IPC): C12 N 15/63

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 6110739 A, WO 9721802 A1, US 5874301 A

L10: Entry 2 of 2 File: DWPI Aug 29, 2000

DERWENT-ACC-NO: 1997-332776
DERWENT-WEEK: 200043
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Immortalised precursor cell populations derived from embryonic stem cell populations - useful for treating genetic diseases in haematopoietic lineage cells e.g. sickle cell anaemia, ~b-thalassemia, etc.

INVENTOR: CHOI, K; HAWLEY, R G ; KELLER, G M

PRIORITY-DATA: 1995US-0570211 (December 11, 1995), 1994US-0343686 (November 21, 1994), 1995WO-US14495 (November 20, 1995), 1999US-0255470 (February 22, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 6110739 A	August 29, 2000		000	C12N005/06
WO 9721802 A1	June 19, 1997	E	158	C12N005/06
US 5874301 A	February 23, 1999		000	C12N005/10

INT-CL (IPC): C12 N 5/06; C12 N 5/10

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

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Term	Documents
ENDOTHELIAL.DWPI,EPAB,JPAB.	3823
ENDOTHELIALS	0
PROGENITOR$	0
PROGENITOR.DWPI,EPAB,JPAB.	953
PROGENITORS.DWPI,EPAB,JPAB.	209
PROGENITORS/STEM.DWPI,EPAB,JPAB.	1
PROGENITOR-INC.DWPI,EPAB,JPAB.	26
PROGENITOR-PRESERVING.DWPI,EPAB,JPAB.	1
PROGENITOR-STROMAL.DWPI,EPAB,JPAB.	1
PROGENITOR/STEM.DWPI,EPAB,JPAB.	4
((ENDOTHELIAL) SAME (PROGENITOR$ OR STEM) SAME (NUCLEIC) SAME (FACTOR$ OR LYMPHOKINE$ OR CYTOKINE$ OR FACTOR$)).JPAB,EPAB,DWPI.	2

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Previous Page Next Page

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Search Results -

Term	Documents
ENDOTHELIAL.DWPI,EPAB,JPAB.	3823
ENDOTHELIALS	0
PROGENITOR$	0
PROGENITOR.DWPI,EPAB,JPAB.	953
PROGENITORS.DWPI,EPAB,JPAB.	209
PROGENITORS/STEM.DWPI,EPAB,JPAB.	1
PROGENITOR-INC.DWPI,EPAB,JPAB.	26
PROGENITOR-PRESERVING.DWPI,EPAB,JPAB.	1
PROGENITOR-STROMAL.DWPI,EPAB,JPAB.	1
PROGENITOR/STEM.DWPI,EPAB,JPAB.	4
STEM.DWPI,EPAB,JPAB.	74024
((ENDOTHELIAL) SAME (PROGENITOR$ OR STEM) SAME (NUCLEIC) SAME (FACTOR$ OR LYMPHOKINE$ OR CYTOKINE$ OR FACTOR$)).JPAB,EPAB,DWPI.	2

There are more results than shown above. Click here to view the entire set.

Database:
US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L10

Refine Search

Recall Text | Clear

Search History

DATE: Friday, April 12, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=JPAB,EPAB,DWPI; PLUR=YES; OP=ADJ			
L10	(endothelial) same (progenitor$ or stem) same (nucleic) same (factor$ or lymphokine$ or cytokine$ or factor$)	2	L10
DB=USPT,PGPB; PLUR=YES; OP=ADJ			
L9	(endothelial) same (progenitor$ or stem) same (nucleic) same (factor$ or lymphokine$ or cytokine$ or factor$)	8	L9
L8	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$) same (cell$)	133	L8
L7	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$) same (cell$ or combination or combin$)	137	L7
L6	L4 and nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$)	209	L6
L5	L4 same nucleic same (cytokine$ or lymphokine$ or factor$ or mitogen$)	9	L5
L4	(endothelial) same (progenitor$ or stem)	926	L4
L3	(ec or endothelial) same (progenitor$ or stem)	1037	L3
L2	L1 and (ec or endothelial) same (progenitor$ or stem)	1	L2
L1	isner-jeffrey$	14	L1

END OF SEARCH HISTORY

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 b 410
       04dec02 16:46:50 User208760 Session D2229.1
            $0.29    0.082 DialUnits File1
     $0.29  Estimated cost File1
     $0.29  Estimated cost this search
     $0.29  Estimated total session cost   0.082 DialUnits

File 410:Chronolog(R)  1981-2002/Nov
       (c) 2002 The Dialog Corporation

      Set  Items  Description
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? set hi ;set hi
HILIGHT set on as ''
HILIGHT set on as ''
? begin 5,73,155,399
       04dec02 16:46:57 User208760 Session D2229.2
            $0.00    0.072 DialUnits File410
     $0.00  Estimated cost File410
     $0.03  TELNET
     $0.03  Estimated cost this search
     $0.32  Estimated total session cost   0.154 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File   5:Biosis Previews(R)  1969-2002/Dec W1
         (c) 2002 BIOSIS
*File   5: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File  73:EMBASE  1974-2002/Nov W4
         (c) 2002 Elsevier Science B.V.
*File  73: Alert feature enhanced for multiple files, duplicates
removal, customized scheduling. See HELP ALERT.
  File 155:MEDLINE(R)  1966-2002/Nov W3
*File 155: For updating information please see Help News155. Alert
feature enhanced with customized scheduling. See HELP ALERT.
  File 399:CA SEARCH(R)  1967-2002/UD=13723
         (c) 2002 American Chemical Society
*File 399: Use is subject to the terms of your user/customer agreement.
Alert feature enhanced for multiple files, etc. See HELP ALERT.

      Set  Items  Description
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? s (endothelial)(10n)(progenitor? or stem?)(20n)(flk? or tie?)(10n)(cd34?)
          305704  ENDOTHELIAL
           84184  PROGENITOR?
          359134  STEM?
            3432  FLK?
           39393  TIE?
           33544  CD34?
      S1      44  (ENDOTHELIAL)(10N)(PROGENITOR? OR STEM?)(20N)(FLK? OR
                  TIE?)(10N)(CD34?)
? rd s1
...completed examining records
      S2      23  RD S1 (unique items)
? t s2/3/all

 2/3/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2002 BIOSIS. All rts. reserv.

13934303   BIOSIS NO.: 200200563124
Lentiviral transfer of the LacZ gene into human endothelial cells and human
  bone marrow mesenchymal stem cells.
AUTHOR: Totsugawa Toshinori; Kobayashi Naoya(a); Okitsu Teru; Noguchi
```

Hirofumi; Watanabe Takamasa; Matsumura Toshihisa; Maruyama Masanobu; Fujiwara Toshiyoshi; Sakaguchi Masakiyo; Tanaka Noriaki
AUTHOR ADDRESS: (a)Department of Surgery, Okayama University Graduate School of Medicine and Dentistry, 2-5-1 Shikata-cho, Okayama, 700-8558** Japan E-Mail: immortal@md.okayama-u.ac.jp
JOURNAL: Cell Transplantation 11 (5):p481-488 2002
MEDIUM: print
ISSN: 0963-6897
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2/3/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13735276 BIOSIS NO.: 200200364097
Endothelial cells genetically selected from differentiating mouse embryonic stem cells incorporate at sites of neovascularization in vivo.
AUTHOR: Marchetti Sandrine; Gimond Clotilde; Iljin Kristiina; Bourcier Christine; Alitalo Kari; Pouyssegur Jacques; Pages Gilles(a)
AUTHOR ADDRESS: (a)Developmental Biology and Cancer Research, Centre Antoine Lacassagne, Institute of Signaling, CNRS UMR 6543, 33 Avenue de Valombrose, Nice**France E-Mail: gpages@unice.fr
JOURNAL: Journal of Cell Science 115 (10):p2075-2085 May 15, 2002
MEDIUM: print
ISSN: 0021-9533
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2/3/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13734752 BIOSIS NO.: 200200363573
Identification of myogenic-endothelial progenitor cells in the interstitial spaces of skeletal muscle.
AUTHOR: Tamaki Tetsuro(a); Akatsuka Akira; Ando Kiyoshi; Nakamura Yoshihiko ; Matsuzawa Hideyuki; Hotta Tomomitsu; Roy Roland R; Edgerton V Reggie
AUTHOR ADDRESS: (a)Dept. of Physiology, Division of Human Structure and Function, Tokai University School of Medicine, Bohseidai, Isehara, Kanagawa, 259-1193**Japan E-Mail: tamaki@is.icc.u-tokai.ac.jp
JOURNAL: Journal of Cell Biology 157 (4):p571-577 May 13, 2002
MEDIUM: print
ISSN: 0021-9525
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2/3/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13632727 BIOSIS NO.: 200200261548
Origin of endothelial progenitors in human post-natal bone marrow.
AUTHOR: Reyes Morayma(a); Dudek Arek; Jahagirdar Balkrishna; Koodie Lisa; Verfaillie Catherine
AUTHOR ADDRESS: (a)Stem Cell Institute, University of Minnesota, Minneapolis, MN**USA
JOURNAL: Blood 98 (11 Part 1):p821a November 16, 2001

MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

2/3/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13632609 BIOSIS NO.: 200200261430
Hematopoietic progenitor-derived endothelial cells, but not human umbilical vein endothelial cells, express PU.1.
AUTHOR: Hildbrand Patrick(a); Anderson Karen L(a); Crisa Laura(a); Salomon Daniel R(a); Torbett Bruce E(a)
AUTHOR ADDRESS: (a)Department of Molecular and Experimental Medicine, Scripps Research Institute, La Jolla, CA**USA
JOURNAL: Blood 98 (11 Part 1):p792a November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

2/3/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13591776 BIOSIS NO.: 200200220597
Identification of the hemoangioblast in post-natal CD34+KDR+ cells.
AUTHOR: Valtieri Mauro(a); Pelosi Elvira; Botta Rosanna(a); Mueller Robert (a); Sgadari Cecilia; Coppola Simona; Masella Barbara(a); Testa Ugo; Rafii Shahin; Peschle Cesare(a)
AUTHOR ADDRESS: (a)Kimmel Cancer Center, T. Jefferson Univerity, Philadelphia, PA**USA
JOURNAL: Blood 98 (11 Part 1):p713a November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

2/3/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13545932 BIOSIS NO.: 200200174753
Origin of endothelial progenitors in human postnatal bone marrow.
AUTHOR: Reyes Morayma; Dudek Arkadiusz; Jahagirdar Balkrishna; Koodie Lisa; Marker Paul H; Verfaillie Catherine M(a)
AUTHOR ADDRESS: (a)University of Minnesota, 422 Delaware Street SE, MMC 716, Minneapolis, MN, 55455**USA E-Mail: verfa001@umn.edu
JOURNAL: Journal of Clinical Investigation 109 (3):p337-346 February, 2002
MEDIUM: print
ISSN: 0021-9738
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2/3/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13523044 BIOSIS NO.: 200200151865
Post-natal CD34+KDR+ cells generate both hematopoietic and endothelial cells in minibulk culture.
AUTHOR: Pelosi Elvira; Valtieri Mauro(a); Sgadari Cecilia; Coppola Simona; Testa Ugo; Peschle Cesare(a)
AUTHOR ADDRESS: (a)Kimmel Cancer Center, T. Jefferson University, Philadelphia, PA**USA
JOURNAL: Blood 98 (11 Part 2):p124b November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 2 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

2/3/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13522996 BIOSIS NO.: 200200151817
Comparative analysis of anti-KDR MoAbs (KDR1, KDR2): Specificity and capacity to recognize both hematopoietic stem cells and endothelial precursors.
AUTHOR: Botta Rosanna(a); Mueller Robert(a); Coppola Simona; Iannolo Gioacchin(a); Pelosi Elvira; De Maria Ruggero; Valtieri Mauro(a); Peschle Cesare(a)
AUTHOR ADDRESS: (a)Kimmel Cancer Center, T. Jefferson University, Philadelphia, PA**USA
JOURNAL: Blood 98 (11 Part 2):p114b November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 2 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

2/3/10 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13500746 BIOSIS NO.: 200200129567
Characterization and expansion of endothelial cells cultured from cord blood, bone marrow and peripheral blood CD34+ cells.
AUTHOR: Keller Ulrich(a); Goetze Katharina S(a); Oostendorp Robert(a); Wimmer Monika(a); von Bubnoff Nikolas(a); Valina Christian; Peschel Christian(a)
AUTHOR ADDRESS: (a)III. Medical Department, Technical University, Munich** Germany
JOURNAL: Blood 98 (11 Part 1):p32a-33a November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

2/3/11 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13104953 BIOSIS NO.: 200100312102
Ontogenic gain of hematopoietic competence correlates with the emergence of hematon units in the mouse bone marrow and liver.
AUTHOR: Blazsek Istvan; Chagraoui Jalila; Uzan Georges; Peault Bruno
JOURNAL: Blood 96 (11 Part 1):p688a November 16, 2000
MEDIUM: print
CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000
SPONSOR: American Society of Hematology
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

2/3/12 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13104484 BIOSIS NO.: 200100311633
Cord blood CD34+ cells co-cultured with HUVEC transfected with adenovirus expressing KL, FL and Tpo leads to expansion of progenitors, week-5 CAFC and NOD-SCID repopulating cells.
AUTHOR: Feugier Pierre(a); Shieh Jae-Hung(a); Jo D-Y(a); MacKenzie Karen L (a); Rafii Shahin; Crystal Ronald G; Moore Malcolm A S(a)
AUTHOR ADDRESS: (a)Laboratory of Developmental Hematopoiesis, Memorial Sloan-Kettering Cancer Center, New York, NY**USA
JOURNAL: Blood 96 (11 Part 1):p281a November 16, 2000
MEDIUM: print
CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000
SPONSOR: American Society of Hematology
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

2/3/13 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12827947 BIOSIS NO.: 200100035096
Ontogenic emergence of the hematon, a morphogenetic stromal unit that supports multipotential hematopoietic progenitors in mouse bone marrow.
AUTHOR: Blazsek Istvan(a); Chagraoui Jalila; Peault Bruno
AUTHOR ADDRESS: (a)INSERM Unite 506, Hopital Paul Brousse, 12-14, Avenue Paul Vaillant-Couturier, 94807, Villejuif Cedex: U506@infobiogen.fr** France
JOURNAL: Blood 96 (12):p3763-3771 December 1, 2000
MEDIUM: print
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

2/3/14 (Item 14 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

12549922 BIOSIS NO.: 200000303424
Progenitor endothelial cells on vascular grafts: An ultrastructural study.
AUTHOR: Maeda Manabu; Fukui Akihiro; Nakamura Toshifumi; Inada Yuji; Tamai Susum; Haga Satomi; Tatsumi-Nagano Kouko; Yamamoto Hiroshi; Ogata Sakae; Iwata Hiroo; Ikada Yoshito
AUTHOR ADDRESS: (a)Department of Anatomy, Nara Medical University, 840, Shijo-cho, Kashihara-City, Nara, 634-8522**Japan
JOURNAL: Journal of Biomedical Materials Research 51 (1):p55-60 July, 2000
MEDIUM: print
ISSN: 0021-9304
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

2/3/15 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11918737 BIOSIS NO.: 199900164846
Maturation of embryonic stem cell into endothelial cells in an in vitro model of vasculogenesis.
AUTHOR: Hirashima Masanori(a); Kataoka Hiroshi; Nishikawa Satomi; Matsuyoshi Norihisa; Nishikawa Shin-Ichi
AUTHOR ADDRESS: (a)Dep. Mol. Genet., Grad. Sch. Med., Kyoto Univ., 53 Kawahara-cho, Shogoin, Sakyo-ku, Kyoto 606-85**Japan
JOURNAL: Blood 93 (4):p1253-1263 Feb. 15, 1999
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2/3/16 (Item 16 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11083052 BIOSIS NO.: 199799704197
Hematopoietic-specific genes are not induced during in vitro differentiation of scl-null embryonic stem cells.
AUTHOR: Elefanty Andrew G(a); Robb Lorraine; Birne Raquella; Begley C Glenn
AUTHOR ADDRESS: (a)Walter and Eliza Hall Inst. Med. Res., PO Royal Mebourne Hosp., Parkville, VIC 3050**Australia
JOURNAL: Blood 90 (4):p1435-1447 1997
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

2/3/17 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10188879 BIOSIS NO.: 199698643797
Predominant expression of a receptor tyrosine kinase, TIE, in hematopoietic stem cells and B cells.
AUTHOR: Hashiyama Motohiro; Iwama Atsushi; Ohshiro Kazuiku; Kurozumi Kouichi; Yasunaga Kunio; Shimizu Yasuaki; Masuho Yasuhiko; Matsuda Ichiro ; Yamaguchi Naoto; Suda Toshio(a)
AUTHOR ADDRESS: (a)Dep. Cell Differentiation, Inst. Molecular Embryol.

Genetics, Kumamoto Univ. Sch. Med., Honjo 2-**Japan
JOURNAL: Blood 87 (1):p93-101 1996
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2/3/18 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10172819 BIOSIS NO.: 199698627737
CD34+ endothelial cell lines derived from murine yolk sac induce the proliferation and differentiation of yolk sac CD34+ hematopoietic progenitors.
AUTHOR: Fennie Christopher; Cheng Jill; Dowbenko Donald; Young Paul; Lasky Laurence A(a)
AUTHOR ADDRESS: (a)Dep. Molecular Oncol., Genentech Inc., 460 Pt. San Bruno Blvd., South San Francisco, CA 94080**USA
JOURNAL: Blood 86 (12):p4454-4467 1995
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

2/3/19 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

11600743 EMBASE No: 2002172727
Contribution of bone marrow cells to liver regeneration after partial hepatectomy in mice
Fujii H.; Hirose T.; Oe S.; Yasuchika K.; Azuma H.; Fujikawa T.; Nagao M.; Yamaoka Y.
H. Fujii, Dept. of Gastroenterological Surgery, Kyoto Univ. Graduate Sch. of Med., 54, Kawara-cho, Shogoin, Sakyo-ku, Kyoto 606-8507 Japan
AUTHOR EMAIL: hideaki@kuhp.kyoto-u.ac.jp
Journal of Hepatology (J. HEPATOL.) (Netherlands) 2002, 36/5 (653-659)
CODEN: JOHEE ISSN: 0168-8278
PUBLISHER ITEM IDENTIFIER: S0168827802000430
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 29

2/3/20 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

11501678 EMBASE No: 2002073467
Phenotypic overlap between hematopoietic cells with suggested angioblastic potential and vascular endothelial cells
Schmeisser A.; Strasser R.H.
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2/3/21 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

06337935 EMBASE No: 1995368318
CD34sup + endothelial cell lines derived from murine yolk sac induce the proliferation and differentiation of yolk sac CD34sup + hematopoietic progenitors
Fennie C.; Cheng J.; Dowbenko D.; Young P.; Lasky L.A.
Department of Molecular Oncology, Genentech, Inc, 460 Pt San Bruno Blvd,South San Francisco, CA 94080 United States
Blood (BLOOD) (United States) 1995, 86/12 (4454-4467)
CODEN: BLOOA ISSN: 0006-4971
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

2/3/22 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE

04331488 EMBASE No: 1990219551
Leukocyte antigen CD34 is expressed by a subset of cultured endothelial cells and on endothelial abluminal microprocesses in the tumor stroma
Schlingemann R.O.; Rietveld F.J.R.; De Waal R.M.W.; Bradley N.J.; Skene A.I.; Davies A.J.S.; Greaves M.F.; Denekamp J.; Ruiter D.J.
Department of Pathology, University Hospital Nijmegen, P.O. Box 9101,6500 HB Nijmegen Netherlands
Laboratory Investigation (LAB. INVEST.) (United States) 1990, 62/6 (690-696)
CODEN: LAINA ISSN: 0023-6837
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

2/3/23 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

136083117 CA: 136(6)83117u JOURNAL
Murine epidermal label-retaining cells isolated by flow cytometry do not express the stem cell markers CD34, Sca-1, or Flk-1
AUTHOR(S): Albert, Michael R.; Foster, Ruth-Ann; Vogel, Jonathan C.
LOCATION: Dermatology Branch, National Cancer Institute, National Institutes of Health, Bethesda, MD, 20892-1908, USA
JOURNAL: J. Invest. Dermatol. (Journal of Investigative Dermatology)
DATE: 2001 VOLUME: 117 NUMBER: 4 PAGES: 943-948 CODEN: JIDEAE ISSN: 0022-202X LANGUAGE: English PUBLISHER: Blackwell Science, Inc.
? t s2/7/all

2/7/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13934303 BIOSIS NO.: 200200563124
Lentiviral transfer of the LacZ gene into human endothelial cells and human bone marrow mesenchymal stem cells.
AUTHOR: Totsugawa Toshinori; Kobayashi Naoya(a); Okitsu Teru; Noguchi Hirofumi; Watanabe Takamasa; Matsumura Toshihisa; Maruyama Masanobu; Fujiwara Toshiyoshi; Sakaguchi Masakiyo; Tanaka Noriaki
AUTHOR ADDRESS: (a)Department of Surgery, Okayama University Graduate

School of Medicine and Dentistry, 2-5-1 Shikata-cho, Okayama, 700-8558** Japan E-Mail: immortal@md.okayama-u.ac.jp
JOURNAL: Cell Transplantation 11 (5):p481-488 2002
MEDIUM: print
ISSN: 0963-6897
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Because one of the attractive characteristics of human immunodeficiency virus type 1 (HIV-1)-based lentiviral vectors is that it can infect even nondividing cells, a lentivirus-mediated gene delivery system is currently being paid a great deal of attention as an innovative tool for gene transfer into target cells. The purpose of the work was to investigate the efficacy of lentiviral transfer of the LacZ gene into human umbilical vein endothelial cells (HUVECs) and human bone marrow mesenchymal stem cells (HMSCs) in vitro. For the present study, a vesicular stomatitis virus G-protein (VSV-G)-pseudotyped lentiviral vector encoding the E. coli LacZ gene tagged with nuclear localization signal (NLS) was generated in 293T cells by means of the three-plasmid system. The resulting lentiviral vector, LtV-NLS/LacZ, was allowed to infect HUVECs and HMSCs. Approximately 70% of HUVECs were positive for LacZ expression and 50% of HMSCs showed LacZ activity. There was no significant difference in transduction efficacy between early and late-passage phases in both cells. LtV-NLS/LacZ-transduced HUVECs showed gene expression of **endothelial** markers including **CD34** and flt-1 and KDR/**flk**-1 of vascular **endothelial** growth factor (VEGF) receptors and had angiogenic potential as efficiently as primarily cultured HUVECs in a Matrigel assay. These findings provide evidence that lentiviral vectors are efficient tools for gene transfer and expression in human endothelial cells and **stem** cells that could be useful for tissue engineering.

2/7/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13735276 BIOSIS NO.: 200200364097
Endothelial cells genetically selected from differentiating mouse embryonic stem cells incorporate at sites of neovascularization in vivo.
AUTHOR: Marchetti Sandrine; Gimond Clotilde; Iljin Kristiina; Bourcier Christine; Alitalo Kari; Pouyssegur Jacques; Pages Gilles(a)
AUTHOR ADDRESS: (a)Developmental Biology and Cancer Research, Centre Antoine Lacassagne, Institute of Signaling, CNRS UMR 6543, 33 Avenue de Valombrose, Nice**France E-Mail: gpages@unice.fr
JOURNAL: Journal of Cell Science 115 (10):p2075-2085 May 15, 2002
MEDIUM: print
ISSN: 0021-9533
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Large scale purification of endothelial cells is of great interest as it could improve tissue transplantation, reperfusion of ischemic tissues and treatment of pathologies in which an endothelial cell dysfunction exists. In this study, we describe a novel genetic approach that selects for endothelial cells from differentiating embryonic **stem** (ES) cells. Our strategy is based on the establishment of ES-cell clones that carry an integrated puromycin resistance gene under the control of a vascular endothelium-specific promoter, tie-1. Using EGFP as a reporter gene, we first confirmed the **endothelial** specificity of the tie-1 promoter in the embryoid body model and in cells differentiated in 2D cultures. Subsequently,

tie-1-EGFP ES cells were used as recipients for the **tie**-1-driven puror transgene. The resulting stable clones were expanded and differentiated for seven days in the presence of VEGF before puromycin selection. As expected, puromycin-resistant cells were positive for EGFP and also expressed several **endothelial** markers, including CD31, **CD34**, VEGFR-1, VEGFR-2, **Tie**-1, VE-cadherin and ICAM-2. Release from the puromycin selection resulted in the appearance of alpha-smooth muscle actin-positive cells. Such cells became more numerous when the population was cultured on laminin-1 or in the presence of TGF-beta1, two known inducers of smooth muscle cell differentiation. The hypothesis that endothelial cells or their progenitors may differentiate towards a smooth muscle cell phenotype was further supported by the presence of cells expressing both CD31 and alpha-smooth muscle actin markers. Finally, we show that purified endothelial cells can incorporate into the neovasculature of transplanted tumors in nude mice. Taken together, these results suggest that application of endothelial lineage selection to differentiating ES cells may become a useful approach for future pro-angiogenic and endothelial cell replacement therapies.

2/7/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13734752 BIOSIS NO.: 200200363573
Identification of myogenic-endothelial progenitor cells in the interstitial spaces of skeletal muscle.
AUTHOR: Tamaki Tetsuro(a); Akatsuka Akira; Ando Kiyoshi; Nakamura Yoshihiko ; Matsuzawa Hideyuki; Hotta Tomomitsu; Roy Roland R; Edgerton V Reggie
AUTHOR ADDRESS: (a)Dept. of Physiology, Division of Human Structure and Function, Tokai University School of Medicine, Bohseidai, Isehara, Kanagawa, 259-1193**Japan E-Mail: tamaki@is.icc.u-tokai.ac.jp
JOURNAL: Journal of Cell Biology 157 (4):p571-577 May 13, 2002
MEDIUM: print
ISSN: 0021-9525
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Putative myogenic and endothelial (myo-endothelial) cell **progenitors** were identified in the interstitial spaces of murine skeletal muscle by immunohistochemistry and immunoelectron microscopy using CD34 antigen. Enzymatically isolated cells were characterized by fluorescence-activated cell sorting on the basis of cell surface antigen expression, and were sorted as a **CD34**+ and CD45- fraction. Cells in this fraction were apprx94% positive for Sca-1, and mostly negative (<3% positive) for CD14, 31, 49, 144, c-kit, and **FLK**-1. The **CD34** +/45- cells formed colonies in clonal cell cultures and colony-forming units displayed the potential to differentiate into adipocytes, **endothelial**, and myogenic cells. The **CD34**+/45- cells fully differentiated into vascular **endothelial** cells and skeletal muscle fibers in vivo after transplantation. Immediately after sorting, CD34+/45- cells expressed only c-met mRNA, and did not express any other myogenic cell-related markers such as MyoD, myf-5, myf-6, myogenin, M-cadherin, Pax-3, and Pax-7. However, after 3 d of culture, these cells expressed mRNA for all myogenic markers. CD34+/45- cells were distinct from satellite cells, as they expressed Bcrp1/ABCG2 gene mRNA (Zhou et al., 2001). These findings suggest that myo-endothelial progenitors reside in the interstitial spaces of mammalian skeletal muscles, and that they can potentially contribute to postnatal skeletal muscle growth.

2/7/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13632727 BIOSIS NO.: 200200261548
Origin of endothelial progenitors in human post-natal bone marrow.
AUTHOR: Reyes Morayma(a); Dudek Arek; Jahagirdar Balkrishna; Koodie Lisa; Verfaillie Catherine
AUTHOR ADDRESS: (a)Stem Cell Institute, University of Minnesota, Minneapolis, MN**USA
JOURNAL: Blood 98 (11 Part 1):p821a November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Until recent, it was thought that blood vessel formation in post-natal life was mediated by sprouting of endothelial cells from existing vessels. However, recent studies have suggested that endothelial "stem cells" may persist into adult life, where they contribute to the formation of new blood vessels, suggesting that like during development neoangiogenesis in the adult may at least in part depend on a process of vasculogenesis. Precursors for endothelial cells have been isolated from BM and peripheral blood. The ontogeny of these endothelial **progenitors** is unknown. We have previously described a rare cell in human post-natal bone marrow capable of differentiating not only in mesenchymal cell types, but also cells of neuroectodermal origin, termed multipotent adult **progenitor** cell or MAPC. We here show that these **CD34**-, vascular-**endothelial** (VE)-cadherin-, AC133+ and fetal liver kinase (**Flk1**)+ MAPC that co-purifies with mesenchymal **stem** cells is a **progenitor** for the angioblasts. In vitro, MAPC cultured for 3 days with vascular **endothelial** growth factor (VEGF) differentiated into **CD34**+, VE-cadherin+, **Flk1**+ cells, a phenotype consistent with angioblasts. Subsequently, MAPC differentiated into cells that express mature **endothelial** markers, such as vWF, Muc-18, CD36, CD31, CD62-P, **Tie** and Tek. In vitro generated **endothelial** cells from MAPC functioned as mature **endothelial** cells, as they (A) could uptake LDL; (B) secreted vWF and widened gap junctions under histamine exposure; (C) reacted to inflammatory cytokines (IL-1a) by upregulating HLA-Class I/II and VCAM, CD62P/E; (D) upregulated VEGF secretion and VEGFR expression under hypoxia and; (E) formed vascular tubes when plated on ECM. When infused in vivo, endothelial cells generated in vitro from MAPC contributed approximately 40% to neoangiogensis in the setting of tumor angiogenesis and wound healing. Moreover, undifferentiated MAPC infused in NOD-SCID mice differentiated in vivo in response to local cues in tumors into endothelial cells that contribute to tumor neoangiogenesis. This in vitro model of pre-angioblast to endothelium differentiation should prove very useful to study commitment to the angioblast stage and beyond. Because MAPC can be culture expanded without obvious senescence for >80 population doublings, they may be an important source of endothelial cells for cellular pro- or anti-angiogenic therapies.

2/7/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13632609 BIOSIS NO.: 200200261430
Hematopoietic progenitor-derived endothelial cells, but not human umbilical vein endothelial cells, express PU.1.
AUTHOR: Hildbrand Patrick(a); Anderson Karen L(a); Crisa Laura(a); Salomon Daniel R(a); Torbett Bruce E(a)
AUTHOR ADDRESS: (a)Department of Molecular and Experimental Medicine,

Scripps Research Institute, La Jolla, CA**USA
JOURNAL: Blood 98 (11 Part 1):p792a November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Recent studies suggest that primitive hematopoietic **progenitors** derived from cord blood may give rise to endothelial **progenitors** capable of homing to sites of wound healing and generating new blood vessels. The transcriptional programming that regulates **endothelial progenitor** development from hematopoietic cells is not well understood. We have previously shown that PU.1 is an hematopoietic cell-specific ets-family transcription factor required for myeloid and B cell development. We now show that human **endothelial** cells derived from **CD34+** and CD45+ cells, obtained from cord blood, express PU.1 message and protein. CD45+ hematopoietic cells, derived from cord blood, generated a monolayer of cells after 30 days in culture using conditions appropriate for **endothelial** growth. Assessment of monolayer for PECAM-1, **Tie** -2 and VE-Cadherin expression by immunofluorescence and confocal microscopy documented that >99% of the cells expressed these markers confirming their endothelial identity. Moreover, these cells were able to participate in blood vessel formation in NOD/SCID mice. Interestingly, analysis of message and protein from these cord blood-derived endothelial cells revealed the presence of PU.1. In contrast, PU.1 message and protein were not detected in human umbilical vein endothelial cells. Contamination of residual hematopoietic cells in the cord blood derived endothelial monolayer as by judged by CD45+ and selected hematopoietic lineage markers was <0.5%. Semi-quantitative assessment of PU.1 by western blotting of extracts from the endothelial monolayer demonstrated that contamination by such low amounts of hematopoietic cells was insufficient to account for the presence of PU.1. Thus, PU.1 is expressed in endothelial cells derived from hematopoietic progenitors. Our results suggest a possible role for PU.1 in development and/or the specialized function of endothelial cells derived from hematopoietic cells. Studies are underway to define the role of PU.1 in development and/or regulation of endothelial cells derived from hematopoietic cells.

2/7/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13591776 BIOSIS NO.: 200200220597
Identification of the hemoangioblast in post-natal CD34+KDR+ cells.
AUTHOR: Valtieri Mauro(a); Pelosi Elvira; Botta Rosanna(a); Mueller Robert (a); Sgadari Cecilia; Coppola Simona; Masella Barbara(a); Testa Ugo; Rafii Shahin; Peschle Cesare(a)
AUTHOR ADDRESS: (a)Kimmel Cancer Center, T. Jefferson Univerity, Philadelphia, PA**USA
JOURNAL: Blood 98 (11 Part 1):p713a November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Post-natal **CD34+** cells expressing KDR (vascular **endothelial** growth factor receptor 2, termed **Flk1** in mice) generate hematopoietic (Ziegler et al., Science, 1999) or

endothelial (Peichev et al., Blood, 2000) progeny or both (Huang et al., Bioch. Bioph. Res. Comm., 1999; Pelosi et al., ASH 2001) in different in vitro/in vivo assays. We hypothesized that **CD34**+KDR+ cells may also comprise hemoangioblasts, i.e., **stem/progenitor** cells bipotent for both lineages, already identified in murine embryos (Nishikawa et al., Development, 1998). We initially observed that in minibulk culture CD34+KDR+ cells generate not only endothelial and hematopoietic progeny, but also a few cells co-expressing markers of both cell types (Pelosi et al., ASH 2001). Thereafter, a series of single cell culture experiments were performed on CD34+KDR+ cells separated by FACS Vantage utilizing the KDR2 MoAb. (i) Single cells were seeded in clonogenic culture (i.e., limiting dilution down to 0.25 cell/well) in coated wells supplemented with hematopoietic and endothelial GFs. In these culture conditions, CD34+KDR+ cells give rise to not only pure hematopoietic or endothelial colonies (<10% of plated cell number), but also mixed hematoendothelial clones (0.5-2.0%): identification of the hematopoietic and endothelial cells was based on immunofluorescence, immunohystochemistry and RT-PCR assay of hematopoietic and endothelial markers (e.g., CD45/CD14/CD41 and VW factor/VE-cadherin/ESCM2/TIE2), e.g., endothelial cells were CD45-CD14-CD41-, while positive for the endothelial-associated markers. These studies demonstrate that 0.5-2.0% of CD34+KDR+ is represented by hemoangioblasts generating mixed hematoendothelial progeny. (ii) Single CD34+KDR+ cells were seeded in Dexter-type long-term culture extended for 3 months (ELTC): blast cells generated in a unicellular well were reseeded for a second and then a third round of single cell ELTC. A minority (apprxeq10%) of blasts generated in tertiary ELTC gave rise in semisolid medium to mixed macroscopic colonies, composed of both hematopoietic and **endothelial** progeny, identified as indicated above. These observations indicate the capacity of **CD34**+KDR+ hemoangioblasts for extensive self-renewal. (iii) **CD34**+KDR- cells transduced with the **Flk1** gene acquire the capacity to generate mixed hemato-**endothelial** colonies in semisolid medium. Altogether, these studies identify the post-natal hemoangioblasts in a **CD34**+KDR+ cell subset, endowed with long term proliferative potential and bipotent differentiation capacity. These hemoangioblasts may represent the lifetime reservoir/source of primitive hematopoietic and **endothelial** precursors, particularly the precursors present in the CD34+KDR+ cell population. We further suggest that hemoangioblasts tested in assays permissive for either hematopoietic or endothelial differentiation may function as unipotent hematopoietic or endothelial **stem** cell respectively.

2/7/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13545932 BIOSIS NO.: 200200174753
Origin of endothelial progenitors in human postnatal bone marrow.
AUTHOR: Reyes Morayma; Dudek Arkadiusz; Jahagirdar Balkrishna; Koodie Lisa; Marker Paul H; Verfaillie Catherine M(a)
AUTHOR ADDRESS: (a)University of Minnesota, 422 Delaware Street SE, MMC 716, Minneapolis, MN, 55455**USA E-Mail: verfa001@umn.edu
JOURNAL: Journal of Clinical Investigation 109 (3):p337-346 February, 2002
MEDIUM: print
ISSN: 0021-9738
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: This study demonstrates that a **CD34**-, vascular **endothelial** cadherin- (VE-cadherin-), AC133+, and fetal liver kinase+ (**Flk1**+) multipotent adult **progenitor** cell (MAPC) that

copurifies with mesenchymal **stem** cells from postnatal human bone marrow (BM) is a **progenitor** for angioblasts. In vitro, MAPCs cultured with VEGF differentiate into **CD34**+, VE-cadherin+, **Flk1**+ cells-a phenotype that would be expected for angioblasts. They subsequently differentiate into cells that express **endothelial** markers, function in vitro as mature **endothelial** cells, and contribute to neoangiogenesis in vivo during tumor angiogenesis and wound healing. This in vitro model of preangioblast-to-endothelium differentiation should prove very useful in studying commitment to the angioblast and beyond. In vivo, MAPCs can differentiate in response to local cues into endothelial cells that contribute to neoangiogenesis in tumors. Because MAPCs can be expanded in culture without obvious senescence for more than 80 population doublings, they may be an important source of endothelial cells for cellular pro- or anti-angiogenic therapies.

2/7/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13523044 BIOSIS NO.: 200200151865
Post-natal CD34+KDR+ cells generate both hematopoietic and endothelial cells in minibulk culture.
AUTHOR: Pelosi Elvira; Valtieri Mauro(a); Sgadari Cecilia; Coppola Simona; Testa Ugo; Peschle Cesare(a)
AUTHOR ADDRESS: (a)Kimmel Cancer Center, T. Jefferson University, Philadelphia, PA**USA
JOURNAL: Blood 98 (11 Part 2):p124b November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 2 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The functional role of vascular **endothelial** growth factor receptor 2 (KDR in humans, **Flk1** in mice) is well established for **endothelial** cells. In embryonic life **Flk1**+cells give rise to both hematopoietic and **endothelial** progeny (Nishikawa et al., Development, 1998). In post-natal life the **CD34**+KDR+ cell subset (ltoreq1.5% of the whole **CD34**+ population) exhibits hematopoietic **stem** cell activity (Ziegler et al., Science 1999), and contains **endothelial** precursors (Peichev et al., Blood, 2000). We have tested the capacity of cord blood CD34+KDR+ cells to generate hematopoietic and endothelial progeny in serum-free liquid suspension cultures. A total of 36 experiments were performed. The sorted CD34+KDR+ cells (KDR1/KDR2 MoAbs, see Botta et al., ASH 2001) were seeded in the culture wells (apprx2,000-4,000 cells/0.2 ml) supplemented with VEGF at saturating level. Control cultures were seeded with CD34+KDR- cells. In all experiments we observed that, after 1-2 wk, all CD34+KDR- cells were dead. Conversely, 30-70% of CD34+KDR+ cells survived (this residual population, composed of small blast cells, is highly-enriched for 12-wk long-term culture initiating cells, see Ziegler et al, Science, 1999). At later culture times, the blast cell population persisted and gradually generated a progeny of larger cells for up to 6 months. The cells were analyzed at sequential culture times by morphology, immunofluorescence, immunohistochemistry and RT-PCR analysis. The small blasts were CD45dim or CD45-, while negative for markers of differentiated hematopoietic and endothelial cells (particularly, CD14 and VW factor/VE-cadherin). The larger cells comprised three cell types: (a) monocytic/dendritic cells (CD45+14+, VW-) at different stages of differentiation/maturation; (b) endothelial cells (CD45-/14-, VW+VE-cadhein+) at sequential stages of development (from small mononucleated to large polynucleated cells); (c)

a few, relatively small cells expressing both hematopoietic and endothelial markers, apparently bipotent for both lineages. These studies indicate that the CD34+KDR+ cell population comprises both hematopoietic and endothelial precursors, thus in line with similar results on in vitro differentiation of Flk1+cells from adult murine bone marrow (Huang et al., Bioch. Bioph. Res. Comm., 1999) Furthermore, we observed that few cells are bipotent for both linages: further studies were performed to verify whether these cells may hypothetically represent nemoangioblasts (see valtiere et al. Identification of nemoangioblast in post-natal CD34+KDR+ cells", ASH 2001).

2/7/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13522996 BIOSIS NO.: 200200151817
Comparative analysis of anti-KDR MoAbs (KDR1, KDR2): Specificity and capacity to recognize both hematopoietic stem cells and endothelial precursors.
AUTHOR: Botta Rosanna(a); Mueller Robert(a); Coppola Simona; Iannolo Gioacchin(a); Pelosi Elvira; De Maria Ruggero; Valtieri Mauro(a); Peschle Cesare(a)
AUTHOR ADDRESS: (a)Kimmel Cancer Center, T. Jefferson University, Philadelphia, PA**USA
JOURNAL: Blood 98 (11 Part 2):p114b November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 2 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A small subset of post-natal **CD34**+ cells (0.5-1.5%) express the vascular **endothelial** grow factor receptor 2 (KDR in humans, **Flk1** in mice): this cell subset comprises hematopoietic **stem** and primitive **progenitor** cells (Ziegler et al, Science, 1999), **endothelial** precursors (Peichev et al, Blood, 2000; Pelosi et al, ASH, 2001) and hemoangioblasts (Valtieri) et la, ASH, 2001). Studies on the **CD34**+KDR+ cell population have been difficult due to the low frequency of these KDR+ cells and utilization of different anti-KDR MoAbs by different groups. Our laboratory has extensively utilized the KDR1 and KDR2 MoAbs raised against synthetic peptides of the extracellular KDR domain (Gesellschaft fuer Biologische Forschung, Braunschweig, Germany; Sigma Co., St. Louis, USA). The MoAbs have been biotinylated at high level (Hoelzel, Koeln, Germany). Extensive titration studies confirmed that the MoAbs stain 0.5-1.5% of CD34+ cells for cord blood (CB), adult bone marrow (BM) and normal or mobilized peripheral blood (NPB, MPB). Experiments with APC-conjugated KDR1 showed that cells recognized by biotinilated KDR2 are also recognized by KDR1. To confirm the specificity of KDR1/KDR2 MoAbs, diverse KDR-leukemic cell lines (MV-4-11, TF1, U937) were transduced with KDR cDNA in retroviral vector (De Maria et al, Nature, 1999). The cells expressing exogenous KDR were recognized by the MoAbs, as evaluated by flow cytometry and immunofluorescence analysis. Furthermore, Western blot analysis indicated that exogenous KDR is recognized by the MoAbs. To confirm that both MoAbs recognize CD34+KDR+ hematopoietic stem cells (HSCs), CD34+ cells freshly separated from CB were stained with KDR1 and/or KDR2 Ab and separated into KDR+ vs KDR- cells by FACSVantage. Unseparated CD34+ cells, CD34+KDR+ and CD34+KDR- cells were tested for HSC repopulating activity in NOD-SCID mice, based on assay of human CD45+ cells in recipient BM after 6-12 wks (the breeders for the mouse colony were kindly provided by D. Bonnet, Camden Town, NJ). In 6 experiments a small number of CD34+KDR+ or CD34+KDR- cells (500-5,000 cells/mouse) were injected: the engraftment levels

induced by CD34+KDR+ cells were markedly higher (from 9- up to >40-fold: the highest ratios were observed when the mice were treated with human hematopietic GFs and the engraftment tested at 12 wks). It is also noteworthy that the CD34++38- cell population enriched for HSCs is recognized by KDR1/KDR2 MoAbs. On the other hand CD34+KDR+ cells grown in liquid suspension or clonogenic culture supplemented with hematopoietic GFs and VEGF generate both hematopoietic and endothelial progeny (Huang et al, Bioch Bioph Res Comm, 1999; Pelosi et al, ASH, 2001), as well as few mixed hematoendothelial clones (Valtieri et al, ASH 2001), indicating the presence of not only HSCs but also endothelial precursors and hemoangioblasts in CD34+KDR+ cells.

2/7/10 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13500746 BIOSIS NO.: 200200129567
Characterization and expansion of endothelial cells cultured from cord blood, bone marrow and peripheral blood CD34+ cells.
AUTHOR: Keller Ulrich(a); Goetze Katharina S(a); Oostendorp Robert(a); Wimmer Monika(a); von Bubnoff Nikolas(a); Valina Christian; Peschel Christian(a)
AUTHOR ADDRESS: (a)III. Medical Department, Technical University, Munich** Germany
JOURNAL: Blood 98 (11 Part 1):p32a-33a November 16, 2001
MEDIUM: print
CONFERENCE/MEETING: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Hematopoietic and endothelial progenitor cells are proposed to be derived from common stem cells called hemangioblasts. Recent studies provide strong evidence for the existence of endothelial progenitor cells (EPC) in CD34+ peripheral blood cells of patients mobilized with G-CSF. The origin of these circulating EPC remains unclear. Since endothelial cells (EC) play a central role in the pathophysiology of diseases such as myocardial infarction and autoimmune diseases, they could soon become of therapeutical interest. In the present study, CD34+ and CD34-lin- cells from different sources (peripheral blood after chemotherapy and G-CSF treatment, bone marrow, cord blood) were isolated and tested for their potential to form endothelial cell layers after stimulation with various growth factors. EC differentiation was evaluated by immunohistochemistry, flow cytometry and RT-PCR. In all experiments, human umbilical vein endothelial cells (HUVEC) were used as control. CD34+ cells cultured in the presence of **Stem** Cell Factor, **Stem** Cell Growth Factor, basic Fibroblast Growth Factor and Vascular **Endothelial** Growth Factor showed most effective expansion of **endothelial** cells. The percentage of successful EC expansion was about 75% (6 of 8) in **CD34**+ cells isolated from cord blood, 33% (3 of 9) from peripheral blood and 50% (2 of 4) from bone marrow. Immunohistochemically, EPC/EC grown from all sources showed high expression of von Willebrand Factor, KDR-1, KDR-2, CD31 and **Tie**-2 while **CD34** expression was low. In contrast to **CD34**+ cells, no EC differentiation or expansion could be observed in cultures from **CD34**-lin- cells using the above mentioned conditions. In selected experiments, functional integrity of expanded EPC/EC was evaluated by tube formation in Matrigel culture and seeding into ischemic areas of blood vessels of immunodeficient rat. Furthermore, we evaluated differential mRNA expression in EPC/EC cultured from different CD34+ sources by AtlasTM cDNA Expression Arrays and found significant differences for multiple mRNAs. In conclusion, the present study shows the generation and in vitro expansion of human EPC/EC from

different CD34+ sources. Development of ex vivo culture/expansion techniques for angioblast-like endothelial precursor cells will be useful to promote vascular healing, could provide suitable coating for vascular grafts, or could be used to deliver toxins to tumor vascular cells.

2/7/11 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13104953 BIOSIS NO.: 200100312102
Ontogenic gain of hematopoietic competence correlates with the emergence of hematon units in the mouse bone marrow and liver.
AUTHOR: Blazsek Istvan; Chagraoui Jalila; Uzan Georges; Peault Bruno
JOURNAL: Blood 96 (11 Part 1):p688a November 16, 2000
MEDIUM: print
CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000
SPONSOR: American Society of Hematology
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: It is generally held that blood cell production starts simultaneously with endochondral ossification in the mouse fetal femur at day16 (E16) from seeded extrinsic HSCs. Osteogenesis progresses continuously at the epiphyseal growth plates, then osteolysis starts in the diaphysis at the newborn stage prior to the emergence of definitive hematolymphopoietic cell lineages. We reinvestigated the blood-forming potential of hematopoietic cells present in the femur marrow primordium as well as the ability of the latter to support hematopoiesis in culture. GM-CFU and day-7 CAFC numbers increased progressively from E17, but primitive, day-35 LTC-IC appeared only from postnatal day 2 in the femur. Unexpectedly, bone marrow taken between E17 and d5 was unable to support myeloid cell production in long-term cultures or to support day-35 LTC-IC growth. However, a gain in stromal cell competence occurred between d5-10, which was correlated with the emergence of "hematon" units in the bone marrow. In the hematon mesenchymal stromal cells (Stro-1+), perivascular lipocytes (desmin+), vascular **endothelial** cells (**CD34**+, **Flk**-1+, Sca-1+) and macrophages amalgamate with a large spectrum of hematopoietic **progenitor** cells: LTC-IC, HPP-CFU, GM-CFU and BFU-E. This shows that acquisition of hematopoietic competence by the bone marrow lags behind for about ten-fifteen days following initial hematopoietic cell influx. Further, we document that stromal hematopoietic units named hematons (i.) are morphogenetic structure that emerge at a well-defined postnatal stage of development in long bones, (ii.) delineate discrete territories for HSC seeding and development, (iii.) embody the most productive hematogenous compartment in the bone marrow under homeostasis. We then addressed whether homologous cell complexes are also present in the hematopoietic liver. Three main types of cell aggregates were isolated by differential sedimentation from mechanically dissociated embryonic liver starting at E12/13. Upon in vitro culture, type 1 yielded stromal cells and large blast cells; type 2 generated both hepatoblasts/hepatocytes and hematogenous cobblestone areas, and type-3 aggregates gave rise only to hepatocytes. The type-2 aggregates sustained the expansion and terminal differentiation of hematopoietic cells and hepatocytes in vitro. Preliminary observations indicate that native type-2 liver aggregates contain Stro1+ stromal cells, similar to marrow hematons, and also hepatoblasts and hepatocytes containing cytokeratin 18. The functional convergence of such novel hepatic stromal cell units and bone marrow hematons is being currently investigated.

2/7/12 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13104484 BIOSIS NO.: 200100311633
Cord blood CD34+ cells co-cultured with HUVEC transfected with adenovirus expressing KL, FL and Tpo leads to expansion of progenitors, week-5 CAFC and NOD-SCID repopulating cells.
AUTHOR: Feugier Pierre(a); Shieh Jae-Hung(a); Jo D-Y(a); MacKenzie Karen L (a); Rafii Shahin; Crystal Ronald G; Moore Malcolm A S(a)
AUTHOR ADDRESS: (a)Laboratory of Developmental Hematopoiesis, Memorial Sloan-Kettering Cancer Center, New York, NY**USA
JOURNAL: Blood 96 (11 Part 1):p281a November 16, 2000
MEDIUM: print
CONFERENCE/MEETING: 42nd Annual Meeting of the American Society of Hematology San Francisco, California, USA December 01-05, 2000
SPONSOR: American Society of Hematology
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: The major limitation to more widespread use of human cord blood (CB) transplantation is the low number of cells obtained, which restricts its use in adult patients due to delayed engraftment of platelets and neutrophils. Ex vivo expansion has been proposed to overcome these drawbacks. In this study, we evaluated the expansion capability of CB **CD34**+ cells co-cultured on human umbilical vascular **endothelial** cells (HUVEC) transfected with adenoviruses expressing **Flk2Flt3** ligand (FL), c-kit ligand (KL) and thrombopoietin (Tpo). The co-cultures resulted in 67+-6- and 311+-25-fold increase of total nucleated cells after one and two weeks respectively; **progenitor** cells, including CFU-GM, BFU-E and CFU-GEMM, increased 13.5 +- 2- and 70 +- 6-fold; and week-5 cobble-stone area forming cells increased 23 +- 2- and 75+-7-fold, respectively. In addition, this co-culture system also markedly increased NOD/SCID repopulating cells. Positive engraftment of human cells in 350 rad irradiated-NOD/SCID mice was defined as >0.1% of human CD45+ cell detected in murine bone marrow cells after 8 to 10 weeks transplantation. In a control cohort, no human cells were detected in mice receiving 1X104 non-cultured CD34+ cells (n=3), while mice receiving 105 non-cultured CD34+ cells engrafted with human cells (6.5%). In a cohort of mice receiving the equivalent of 1X104 CD34+ cells after one week co-culture, all animals (n=3) had human cells (2.61%). One out of three mice receiving the equivalent of 2X103 CD34+ cells cultured for 1 week had human cell engraftment. In a cohort of animals (n=3) receiving the equivalent of 1X104 CD34+ following two weeks of co-culture, all mice were positive for human cells (average 0.8%). Our data demonstrates that FL, KL and Tpo adenovector-transfected HUVEC provides an optimal microenvironment for expansion of hematopoietic stem cells detected by in vitro and in vivo assay. Since autologous HUVEC can be used, this culture system provides a clinically relevant method for optimizing human CB ex vivo expansion.

2/7/13 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12827947 BIOSIS NO.: 200100035096
Ontogenic emergence of the hematon, a morphogenetic stromal unit that supports multipotential hematopoietic progenitors in mouse bone marrow.
AUTHOR: Blazsek Istvan(a); Chagraoui Jalila; Peault Bruno
AUTHOR ADDRESS: (a)INSERM Unite 506, Hopital Paul Brousse, 12-14, Avenue

Paul Vaillant-Couturier, 94807, Villejuif Cedex: U506@infobiogen.fr** France
JOURNAL: Blood 96 (12):p3763-3771 December 1, 2000
MEDIUM: print
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: Development of the full repertoire of hematopoietic-lymphopoietic cells from a single stem cell requires specific contacts with stromal cells. The spatio-temporal organization of these cell associations in the bone marrow in ontogeny is, however, not well understood. In the adult, 10% of marrow cells form a cohort of compact aggregates, the hematon. In the hematon mesenchymal cells (Stro-1+), perivascular lipocytes (desmin+), **endothelial** cells (**CD34**+, **Flk**-1+, Sca-1+), and macrophages amalgamate with the hematopoietic **progenitors** long-term culture-initiating cells (LTC-IC), cobblestone area-forming cell (CAFC), high-proliferative-potential colony-forming unit (HPP-CFU), granulocyte-macrophage (GM)-CFU, and burst-forming unit-erythroid (BFU-E). During endochondral ossification of the femur, GM-CFU and day 7 CAFC numbers increased progressively from day 17 of gestation, but primitive, day 35 LTC-IC appeared from postnatal day 2. Unexpectedly, bone marrow (BM) taken between embryonic day 17 and day 5 was unable to support myeloid cell production in long-term cultures or to support day 35 LTC-IC growth. However, a gain in stromal cell competence occurred between days 7 and 10, which was correlated with the emergence of hematon in the BM. Thus, acquisition of hematopoietic competence by BM lags behind for approximately 10 days after the initial hematopoietic cell influx. In the adult, the hematon fraction was 3.7-fold enriched in day 35 LTC-IC over the buffy coat. It produced more GM-CFU and HPP-CFU in myeloid culture and more B cells in lymphopoietic "switch" cultures. It is reported that stromal hematopoietic units named hematons are specific morphogenetic structures that emerge at a well-defined postnatal stage of development in long bones, delineate discrete territories for hematopoietic stem cell seeding and development, embody the most productive hematogenous compartment in the BM, and probably enclose a morphogenetic organizer.

2/7/14 (Item 14 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12549922 BIOSIS NO.: 200000303424
Progenitor endothelial cells on vascular grafts: An ultrastructural study.
AUTHOR: Maeda Manabu; Fukui Akihiro; Nakamura Toshifumi; Inada Yuji; Tamai Susum; Haga Satomi; Tatsumi-Nagano Kouko; Yamamoto Hiroshi; Ogata Sakae; Iwata Hiroo; Ikada Yoshito
AUTHOR ADDRESS: (a)Department of Anatomy, Nara Medical University, 840, Shijo-cho, Kashihara-City, Nara, 634-8522**Japan
JOURNAL: Journal of Biomedical Materials Research 51 (1):p55-60 July, 2000
MEDIUM: print
ISSN: 0021-9304
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: The morphology of **progenitor endothelial** cells on vascular graft surfaces is addressed in this report. Such cells were seen to attach to intima-expressed **CD34** and **Flk**-1 antigen and showed positive 5-bromo-2-deoxyuridine (BrdU) uptake. We examined

CD34 and **Flk**-1 antigen-expressing **endothelial progenitor** cells three-dimensionally using confocal laser scanning microscopy (CLSM). Under detailed CLSM observation, through an ameboid-form cell, these **progenitor endothelial** cells changed from a globular to a flattened form. We also investigated these morphological changes using scanning electron microscopy. From these results, **progenitor** endothelial cells were observed not only near the advancing edge of endothelium, but also around the developing intimal site. Their form also changed from globular to flattened as observed in the CLSM results. These morphological changes were seen more frequently near the advancing edge and around the developing intimal site. They attached directly to vascular prosthesis fibers and likewise covered the graft luminal surface. Progenitor endothelial cells in any form had a common surface structure. We conclude from our results that progenitor endothelial cells can attach to graft fibers directly without clotting and directly cover the graft luminal surfaces.

2/7/15 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11918737 BIOSIS NO.: 199900164846
Maturation of embryonic stem cell into endothelial cells in an in vitro model of vasculogenesis.
AUTHOR: Hirashima Masanori(a); Kataoka Hiroshi; Nishikawa Satomi; Matsuyoshi Norihisa; Nishikawa Shin-Ichi
AUTHOR ADDRESS: (a)Dep. Mol. Genet., Grad. Sch. Med., Kyoto Univ., 53 ,Kawahara-cho, Shogoin, Sakyo-ku, Kyoto 606-85**Japan
JOURNAL: Blood 93 (4):p1253-1263 Feb. 15, 1999
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A primitive vascular plexus is formed through coordinated regulation of differentiation, proliferation, migration, and cell-cell adhesion of **endothelial** cell (EC) **progenitors**. In this study, a culture system was devised to investigate the behavior of purified EC **progenitors** in vitro. Because **Flk**-1+ cells derived from ES cells did not initially express other EC markers, they were sorted and used as EC **progenitors**. Their in vitro differentiation into ECs, via vascular **endothelial**-cadherin (VE-cadherin)+ platelet-**endothelial** cell adhesion molecule-1 (PECAM-1)+ **CD34**- to VE-cadherin+ PECAM-1+ **CD34**+ stage, occurred without exogenous factors, whereas their proliferation, particularly at low cell density, required OP9 feeder cells. On OP9 feeder layer, EC **progenitors** gave rise to sheet-like clusters of **Flk**-1+ cells, with VE-cadherin concentrated at the cell-cell junction. The growth was suppressed by Flt-1-IgG1 chimeric protein and dependent on vascular endothelial growth factor (VEGF) but not placenta growth factor (PIGF). Further addition of VEGF resulted in cell dispersion, indicating the role of VEGF in the migration of ECs as well as their proliferation. Cell-cell adhesion of ECs in this culture system was mediated by VE-cadherin. Thus, the culture system described here is useful in dissecting the cellular events of EC progenitors that occur during vasculogenesis and in investigating the molecular mechanisms underlying these processes.

2/7/16 (Item 16 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11083052 BIOSIS NO.: 199799704197

Hematopoietic-specific genes are not induced during in vitro differentiation of scl-null embryonic stem cells.
AUTHOR: Elefanty Andrew G(a); Robb Lorraine; Birne Raquella; Begley C Glenn
AUTHOR ADDRESS: (a)Walter and Eliza Hall Inst. Med. Res., PO Royal Mebourne Hosp., Parkville, VIC 3050**Australia
JOURNAL: Blood 90 (4):p1435-1447 1997
ISSN: 0006-4971
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: The helix-loop-helix transcription factor, scl, plays an essential role in hematopoietic development. Embryos in which the gene has been disrupted fail to develop yolk sac erythropoiesis, and scl-null embryonic stem cells do not contribute to hematopoiesis in chimeric mice. To analyze the molecular consequences of scl deficiency, we compared the gene expression profiles of control (wild-type and scl-heterozygous) and scl-null embryonic **stem** cells differentiated in vitro for up to 12 days. In control and scl-null embryoid bodies the temporal expression pattern of genes associated with the formation of ventral mesoderm, such as Brachyury, bone morphogenetic protein-4, and **flk**-1, was identical. Similarly, GATA-2, **CD34**, and c-kit, which are coexpressed in **endothelial** and hematopoietic lineages, were expressed normally in scl-null embryonic **stem** cell lines. However, hematopoietic-restricted genes, including the transcription factors GATA-1, EKLF, and PU.1 as well as globin genes and myeloperoxidase, were only expressed in wild-type and scl-heterozygous embryonic stem cells. Indirect immunofluorescence was used to confirm the observations that GATA-1 and globins were only present in control embryoid bodies but that CD34 was found on both control and scl-null embryoid bodies. These data extend the previous gene ablation studies and support a model whereby scl is absolutely required for commitment of a putative hemangioblast to the hematopoietic lineage but that it is dispensable for endothelial differentiation.

2/7/17 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10188879 BIOSIS NO.: 199698643797
Predominant expression of a receptor tyrosine kinase, TIE, in hematopoietic stem cells and B cells.
AUTHOR: Hashiyama Motohiro; Iwama Atsushi; Ohshiro Kazuiku; Kurozumi Kouichi; Yasunaga Kunio; Shimizu Yasuaki; Masuho Yasuhiko; Matsuda Ichiro ; Yamaguchi Naoto; Suda Toshio(a)
AUTHOR ADDRESS: (a)Dep. Cell Differentiation, Inst. Molecular Embryol. Genetics, Kumamoto Univ. Sch. Med., Honjo 2-**Japan
JOURNAL: Blood 87 (1):p93-101 1996
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A receptor tyrosine kinase (RTK), TIE (tyrosine kinase that contains immunoglobulin-like loops and epidermal growth factor (EGF) homology domains), is expressed in vascular endothelial and hematopoietic cells. We generated monoclonal antibodies (MoAbs) against the extracellular domain of TIE and a polyclonal antibody against the TIE carboxy-terminus and used them to analyze expression of TIE in hematopoietic cells. Western blotting detected two forms of TIE protein with a molecular mass of 135 and 130 kD in hematopoietic and **endothelial** cells. Northern blotting analysis revealed that **TIE** was expressed preferentially in undifferentiated cell lines, especially when megakaryocytic, but not erythroid differentiation was

induced. Reverse transcriptase-polymerase chain reaction (RT-PCR) showed that **TIE** was predominantly expressed in the human hematopoietic progenitor fraction, **CD34**+ cells. Fluorescence-activated cell sorting (FACS) showed that 42% of **CD34**+ and 17% of KIT-positive (KIT+) cells were **TIE**-positive (**TIE**+). The majority (81%) of the primitive hematopoietic stem cells, **CD34**+CD38+ cells, were **TIE**+. Assays of **progenitor** cells and long-term culture-initiating cells (LTC-IC) showed that the **TIE**+ fraction contained more primitive cells than the **TIE**- fraction. Some **TIE**+ cells were in the **CD34**- fraction, which were CD19+ and CD20+ (B cells). These findings indicate that **TIE** has a unique spectrum of expression in primitive hematopoietic **stem** cells and B cells. Although its ligand has not been identified, **TIE** and its ligand may establish a novel regulatory pathway not only in early hematopoiesis, but also in the differentiation and/or proliferation of B cells.

2/7/18 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10172819 BIOSIS NO.: 199698627737
CD34+ endothelial cell lines derived from murine yolk sac induce the proliferation and differentiation of yolk sac CD34+ hematopoietic progenitors.
AUTHOR: Fennie Christopher; Cheng Jill; Dowbenko Donald; Young Paul; Lasky Laurence A(a)
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JOURNAL: Blood 86 (12):p4454-4467 1995
ISSN: 0006-4971
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Embryonic hematopoiesis is initiated in part in the blood islands of the yolk sac. Previous confocal microscopic analysis has shown that the CD34 antigen, a mucin-like cell surface glycoprotein that is expressed by hematopoietic progenitors and all endothelial cells of the adult and embryo, is also found on a subset of luminal hematopoietic-like cells in the yolk sac blood islands as well as on the vascular endothelium lining these early hematopoietic locations. We show here that, as in all other hematopoietic sites thus far examined, immunoaffinity-purified CD34+ nonadherent cells from murine yolk sacs contain the vast majority of erythroid and myeloid **progenitor** cell colony forming activity. To examine the developmental interactions between these CD34+ hematopoietic **progenitor** cells of the yolk sac and the CD34+ yolk sac endothelium, we have immunoaffinity-purified adherent **endothelial** cells from day 10.5 yolk sacs using **CD34** antiserum and produced cell lines by transformation with a retrovirus expressing the polyoma middle T antigen. Analysis of these cell lines for **CD34**, von Willebrand's factor, **FLK** 1 and FLT 1 expression, and capillary growth in Matrigel indicates that they appear to be **endothelial** cells, consistent with their original phenotype in vivo. Coculture of yolk sac **CD34**+ hematopoietic cells on these **endothelial** cell lines results in up to a 60-fold increase in total hematopoietic cell number after approximately 8 days. Analysis of these expanded hematopoietic cells showed that the majority were of the monocyte/macrophage lineage. In addition, examination of the cultures showed the rapid formation of numerous cobblestone areas, a previously described morphologic entity thought to be representative of early pluripotential stem cells. Scrutiny of the ability of these endothelial cell lines to expand committed progenitor cells showed up to a sixfold

increase in erythroid and myeloid colony-forming cells after 3 to 6 days in culture, consistent with the notion that these embryonic endothelial cells mediate the expansion of these precursor cells Polymerase chain reaction analyses showed that most of the cell lines produce FLK-2/FLT-3 ligand, stem cell factor, macrophage colony-stimulating factor, leukemia-inhibitory factor, and interleukin-6 (IL-6), whereas there is a generally low or not measurable production of granulocyte colony-stimulating factor, granulocyte-macrophage colony-stimulating factor, IL-1, IL-3, transforming growth factor beta-1, erythropoietin, or thrombopoietin. The output of mature hematopoietic cells from these cocultures can be modified to include an erythroid population by the addition of exogenous erythropoietin. These data suggest that endothelial cell lines derived from the yolk sac provide an appropriate hematopoietic environment for the expansion and differentiation of yolk sac progenitor cells into at least the myeloid and erythroid lineages.

2/7/19 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

11600743 EMBASE No: 2002172727
Contribution of bone marrow cells to liver regeneration after partial hepatectomy in mice
Fujii H.; Hirose T.; Oe S.; Yasuchika K.; Azuma H.; Fujikawa T.; Nagao M.; Yamaoka Y.
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Journal of Hepatology (J. HEPATOL.) (Netherlands) 2002, 36/5 (653-659)
CODEN: JOHEE ISSN: 0168-8278
PUBLISHER ITEM IDENTIFIER: S0168827802000430
DOCUMENT TYPE: Journal ; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 29

Background/Aims: We examined whether bone marrow (BM) cells can commit to liver-consisting cells during liver regeneration after partial hepatectomy, using mice transplanted with green fluorescent protein (GFP) positive BM from GFP transgenic mice. Methods: Partial hepatectomy or sham operation was performed. Lineage marker analysis of GFP positive liver cells was by immunostaining and flow cytometry. DiI-labeled acetylated low-density lipoprotein uptake or microsphere phagocytosis was examined in vitro. Lineage marker expression in BM and peripheral blood (PB) cells, and the vascular endothelial growth factor (VEGF) concentration in the liver were also examined. Results: In hepatectomized mice, significantly more GFP positive cells participated in liver sinusoid than in shamoperated mice, expressing CD31 but not albumin. The percentage of cells that incorporated acetylated low-density lipoprotein but not microspheres was 69.5 +/- 3.4%, while 28.3 +/- 2.6% incorporated both, revealing sinusoidal **endothelial** and Kupffer cells, respectively. Increased expression of the CD31 and CD16/CD32 on GFP positive liver cells was also detected. The elevation of the VEGF concentration during liver regeneration and the increase in the **CD34** and **Flk1** expression in the liver, BM, and PB cells suggested **endothelial progenitor** cell mobilization. Conclusions: GFP cell-marking provided direct evidence of the BM cells participation in liver regeneration after hepatectomy, where the majority was committed to sinusoidal **endothelial** cells probably through endothelial **progenitor** cell mobilization. (c) 2002 European Association for the Study of the Liver. Published by Elsevier Science B.V. All rights reserved.

2/7/20 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

11501678 EMBASE No: 2002073467
Phenotypic overlap between hematopoietic cells with suggested angioblastic potential and vascular endothelial cells
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Journal of Hematotherapy and Stem Cell Research (J. HEMATOTHER. STEM CELL RES.) (United States) 2002, 11/1 (69-79)
CODEN: JHERF ISSN: 1525-8165
DOCUMENT TYPE: Journal ; Review
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 88

The existence of angioblast-like circulating **endothelial progenitor** cells (EPC) in adult humans has been suggested recently. Their role in postnatal angiogenesis is under intensive investigation. Discrimination between the supposed angioblasts (AC133SUP+/**FLK**-1SUP+/**CD34SUP**+) and mature **endothelial** cells (ECs) is complicated by the fact that subsets of hematopoietic cells express markers similar to those of ECs. Among these, monocytes/macrophages and monocyte-derived dendritic cells (DCs) are more differentiated hematopoietic cell populations. They show a wide phenotypic overlap with particularly sinusoidal and microvascular ECs. Furthermore, under local angiogenic growth conditions, monocytes or monocyte precursors or immature DCs may differentiate into endothelial-like cells (ELC). Initial evidence suggests an endothelium-independent revascularization potential carried by macrophages. These macrophages have been shown to form "tunnel-like structures" in ischemic regions. Future studies will need to address the question of whether monocyte-/dendritic cell-derived ELC can develop a similar functional behavior in vasoregulation, coagulation, and fibrinolysis, as described for vascular ECs, and thus may contribute to neoangiogenesis by a direct vessel-forming role.

2/7/21 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

06337935 EMBASE No: 1995368318
CD34sup + endothelial cell lines derived from murine yolk sac induce the proliferation and differentiation of yolk sac CD34sup + hematopoietic progenitors
Fennie C.; Cheng J.; Dowbenko D.; Young P.; Lasky L.A.
Department of Molecular Oncology, Genentech, Inc, 460 Pt San Bruno Blvd,South San Francisco, CA 94080 United States
Blood (BLOOD) (United States) 1995, 86/12 (4454-4467)
CODEN: BLOOA ISSN: 0006-4971
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Embryonic hematopoiesis is initiated in part in the blood islands of the yolk sac. Previous confocal microscopic analysis has shown that the CD34 antigen, a mucin-like cell surface glycoprotein that is expressed by hematopoietic progenitors and all endothelial cells of the adult and embryo, is also found on a subset of luminal hematopoietic-like cells in the yolk sac blood islands as well as on the vascular endothelium lining these early hematopoietic locations. We show here that, as in all other hematopoietic sites thus far examined, immunoaffinity-purified CD34sup + nonadherent cells from murine yolk sacs contain the vast majority of

erythroid and myeloid **progenitor** cell colony forming activity. To examine the developmental interactions between these CD34sup + hematopoietic **progenitor** cells of the yolk sac and the CD34sup + yolk sac endothelium, we have immunaffinity-purified adherent **endothelial** cells from day 10.5 yolk sacs using **CD34** antiserum and produced cell lines by transformation with a retrovirus expressing the polyoma middle T antigen. Analysis of these cell lines for **CD34**, von Willebrand's factor, **FLK** 1 and FLT 1 expression, and capillary growth in Matrigel indicates that they appear to be **endothelial** cells, consistent with their original phenotype in vivo. Coculture of yolk sac **CD34sup** + hematopoietic cells on these **endothelial** cell lines results in up to a 60-fold increase in total hematopoietic cell number after approximately 8 days. Analysis of these expanded hematopoietic cells showed that the majority were of the monocyte/macrophage lineage. In addition, examination of the cultures showed the rapid formation of numerous cobblestone areas, a previously described morphologic entity thought to be representative of early pluripotential stem cells. Scrutiny of the ability of these endothelial cell lines to expand committed progenitor cells showed up to a sixfold increase in erythroid and myeloid colony-forming cells after 3 to 6 days in culture, consistent with the notion that these embryonic endothelial cells mediate the expansion of these precursor cells. Polymerase chain reaction analyses showed that most of the cell lines produce FLK-2/FLT-3 ligand, stem cell factor, macrophage colony-stimulating factor, leukemia-inhibitory factor, and interleukin-6 (IL- 6), whereas there is a generally low or not measurable production of granulocyte colony-stimulating factor, granulocyte-macrophage colony- stimulating factor, IL-1, IL-3, transforming growth factor beta-1, erythropoietin, or thrombopoietin. The output of mature hematopoietic cells from these cocultures can be modified to include an erythroid population by the addition of exogenous erythropoietin. These data suggest that endothelial cell lines derived from the yolk sac provide an appropriate hematopoietic environment for the expansion and differentiation of yolk sac progenitor cells into at least the myeloid and erythroid lineages.

2/7/22 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE

04331488 EMBASE No: 1990219551
Leukocyte antigen CD34 is expressed by a subset of cultured endothelial cells and on endothelial abluminal microprocesses in the tumor stroma
Schlingemann R.O.; Rietveld F.J.R.; De Waal R.M.W.; Bradley N.J.; Skene A.I.; Davies A.J.S.; Greaves M.F.; Denekamp J.; Ruiter D.J.
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Laboratory Investigation (LAB. INVEST.) (United States) 1990, 62/6 (690-696)
CODEN: LAINA ISSN: 0023-6837
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

It has been reported that the human haemopoietic **progenitor** cell antigen **CD34** is also expressed by vascular structures. To investigate its precise vascular localization, we have studied the cellular and subcellular distribution of **CD34** in normal tissues and pathologic tissues with neovascularization. In normal resting **tieeuse**, anti-**CD34** antibodies. ICH3 and QBEND-10 predominantly stain the luminal **endothelial** membrane, whereas the abluminal membrane is negative or weakly positive. In contrast, a striking staining of **endothelial** abluminal microprocesses (EAM) was found in the tumor stroma. These structures, measuring up to 20 mum in length, could be observed in thick vibratome sections both at the tips of vascular sprouts and, also frequently, on fully formed microvessels. The number of vascular sprouts

and EAM varied widely between different tumors. CD34-stained EAM were sparsely present in fetal tissue of 10 weeks gestation, but they could not be demonstrated in granulation tissue of wound healing. By immunoelectron microscopy, the EAM were continuous with the cytoplasm of endothelial cells showing an immature phenotype as seen in regeneration. In cultured human umblilical vein endothelium, CD34 was preferentially found on a small subset of cells with the morphologic appearance of migrating cells. These findings suggest that CD34 is an endothelial marker for EAM present during angiogenesis.

2/7/23 (Item 1 from file: 399)
DIALOG(R)File 399:CA SEARCH(R)

136083117 CA: 136(6)83117u JOURNAL
Murine epidermal label-retaining cells isolated by flow cytometry do not express the stem cell markers CD34, Sca-1, or Flk-1
AUTHOR(S): Albert, Michael R.; Foster, Ruth-Ann; Vogel, Jonathan C.
LOCATION: Dermatology Branch, National Cancer Institute, National Institutes of Health, Bethesda, MD, 20892-1908, USA
JOURNAL: J. Invest. Dermatol. (Journal of Investigative Dermatology)
DATE: 2001 VOLUME: 117 NUMBER: 4 PAGES: 943-948 CODEN: JIDEAE ISSN: 0022-202X LANGUAGE: English PUBLISHER: Blackwell Science, Inc.
SECTION:
CA213001 Mammalian Biochemistry
IDENTIFIERS: epidermis keratinocyte stem cell marker
DESCRIPTORS:
Skin...
epidermis; murine epidermal label-retaining cells isolated by flow cytometry do not express the stem cell markers CD34, Sca-1, or Flk-1
Vascular endothelial growth factor receptors...
gene KDR; murine epidermal label-retaining cells isolated by flow cytometry do not express the stem cell markers CD34, Sca-1, or Flk-1
Skin...
keratinocyte; murine epidermal label-retaining cells isolated by flow cytometry do not express the stem cell markers CD34, Sca-1, or Flk-1
CD34(antigen)... Biomarkers(biological responses)...
murine epidermal label-retaining cells isolated by flow cytometry do not express the stem cell markers CD34, Sca-1, or Flk-1
Proteins...
Sca-1; murine epidermal label-retaining cells isolated by flow cytometry do not express the stem cell markers CD34, Sca-1, or Flk-1
?

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 e au=isner jeffrey ?

Ref    Items  Index-term
E1         5  AU=ISNER JEFFERY M
E2        10  AU=ISNER JEFFREY
E3         0 *AU=ISNER JEFFREY ?
E4       313  AU=ISNER JEFFREY M
E5         1  AU=ISNER JEFFREY MICHAEL
E6         1  AU=ISNER JEFFRREY M
E7         1  AU=ISNER JENNIFER
E8         1  AU=ISNER L
E9         3  AU=ISNER M E
E10        2  AU=ISNER M S
E11        1  AU=ISNER M.-E.
E12        1  AU=ISNER M.E.

           Enter P or PAGE for more
? s e1-e6
                5  AU=ISNER JEFFERY M
               10  AU=ISNER JEFFREY
                0  AU=ISNER JEFFREY ?
              313  AU=ISNER JEFFREY M
                1  AU=ISNER JEFFREY MICHAEL
                1  AU=ISNER JEFFRREY M
      S3      330  E1-E6
? s s3 and endothelial
              330  S3
           305704  ENDOTHELIAL
      S4      193  S3 AND ENDOTHELIAL
? rd s4
...examined 50 records  (50)
...examined 50 records  (100)
...examined 50 records  (150)
...completed examining records
      S5      174  RD S4 (unique items)
? s s5 and endothelial(10n)(progenitor? or stem?)
              174  S5
           305704  ENDOTHELIAL
            84184  PROGENITOR?
           359134  STEM?
             1571  ENDOTHELIAL(10N)(PROGENITOR? OR STEM?)
      S6       29  S5 AND ENDOTHELIAL(10N)(PROGENITOR? OR STEM?)
? rd s6
...completed examining records
      S7       29  RD S6 (unique items)
? t s7/3/all

 7/3/1     (Item 1 from file: 5)
DIALOG(R)File   5:Biosis Previews(R)
(c) 2002 BIOSIS. All rts. reserv.

13889304   BIOSIS NO.: 200200518125
Therapeutic angiogenesis for coronary artery disease.
AUTHOR: Freedman Saul Benedict(a); Isner Jeffrey M(a
AUTHOR ADDRESS: (a)Inq.: Mickey Neely, St. Elizabeth's Medical Center, 736
  Cambridge Street, Boston, MA, 02135**USA E-Mail: mneely222@aol.com
JOURNAL: Annals of Internal Medicine  136 (1):p54-71 1 January, 2002
MEDIUM: print
ISSN: 0003-4819
DOCUMENT TYPE: Literature Review
RECORD TYPE: Abstract
LANGUAGE: English
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7/3/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13868605 BIOSIS NO.: 200200497426
Constitutive human telomerase reverse transcriptase expression enhances regenerative properties of **endothelial progenitor** cells.
AUTHOR: Murasawa Satoshi; Llevadot Joan; Silver Marcy; **Isner Jeffrey M**; Losordo Douglas W(a); Asahara Takayuki(a
AUTHOR ADDRESS: (a)St Elizabeth's Medical Center, 736 Cambridge St, Boston, MA, 02135**USA E-Mail: douglas.losordo@tufts.edu, asa777@aol.com
JOURNAL: Circulation 106 (9):p1133-1139 August 27, 2002
MEDIUM: print
ISSN: 0009-7322
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

7/3/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13868129 BIOSIS NO.: 200200496950
Determination of bone marrow-derived **endothelial progenitor** cell significance in angiogenic growth factor-induced neovascularization in vivo.
AUTHOR: Murayama Toshinori; Tepper Oren M; Silver Marcy; Ma Hong; Losordo Douglas W; **Isner Jeffery M**; Asahara Takayuki(a); Kalka Christoph
AUTHOR ADDRESS: (a)Department of Medicine (Cardiovascular Research), St. Elizabeth's Medical Center of Boston, 736 Cambridge Street, Brighton, MA, 02135-2997**USA E-Mail: Asa777@aol.com
JOURNAL: Experimental Hematology (Charlottesville) 30 (8):p967-972 August, 2002
MEDIUM: print
ISSN: 0301-472X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

7/3/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13756849 BIOSIS NO.: 200200385670
Statin therapy accelerates reendothelialization: A novel effect involving mobilization and incorporation of bone marrow-derived **endothelial progenitor** cells.
AUTHOR: Walter Dirk H; Rittig Kilian; Bahlmann Ferdinand H; Kirchmair Rudolf; Silver Marcy; Murayama Toshinori; Nishimura Hiromi; Losordo Douglas W; Asahara Takayuki(a); **Isner Jeffrey M**
AUTHOR ADDRESS: (a)St Elizabeth's Medical Center, 736 Cambridge St, Boston, MA, 02135**USA E-Mail: asa777@aol.com
JOURNAL: Circulation 105 (25):p3017-3024 June 25, 2002
MEDIUM: print
ISSN: 0009-7322
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

7/3/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13659137 BIOSIS NO.: 200200287958
Autologous, percutaneous, intramyocardial transplantation of **endothelial progenitor** cells enhances neovascularization and attenuates chronic myocardial ischemia in swine.
AUTHOR: Kawamoto Atsuhiko(a); Tkebuchava Tengis(a); Yamaguchi Jun-ichi(a); Nishimura Hiromi(a); Milliken Charles(a); Masuo Osamu(a); Iwaguro Hideki (a); Silver Marcy(a); Ma Hong(a); Kearney Marianne(a); **Isner Jeffrey M**(a); Asahara Takayuki(a
AUTHOR ADDRESS: (a)St Elizabeth's Med Ctr, Boston, MA**USA
JOURNAL: Circulation 104 (17 Supplement):pII443 October 23, 2001
MEDIUM: print
CONFERENCE/MEETING: Scientific Sessions 2001 of the American Heart Association Anaheim, California, USA November 11-14, 2001
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13646109 BIOSIS NO.: 200200274930
HMG-CoA reductase inhibitor mobilizes bone-marrow derived **endothelial progenitor** cells.
AUTHOR: Murasawa Satoshi(a); Llevadot Joan(a); Kureishi Yasuko(a); Uchida Shigeki(a); Masuda Haruchika(a); Kawamoto Atsuhiko; Walsh Kenneth; **Isner Jeffrey M**; Asahara Takayuki
AUTHOR ADDRESS: (a)St Elizabeth's Med Ctr, Tufts Univ Sch of Med, Brighton, MA**USA
JOURNAL: Circulation 104 (17 Supplement):pII261 October 23, 2001
MEDIUM: print
CONFERENCE/MEETING: Scientific Sessions 2001 of the American Heart Association Anaheim, California, USA November 11-14, 2001
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/7 (Item 7 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13635783 BIOSIS NO.: 200200264604
Circulating **endothelial progenitor** cells provide neo-endothelium for tissue-engineered bio-arterial conduits.
AUTHOR: Tkebuchava Tengiz(a); Pola Roberto; Murayama Toshinori; Yoon Young-sup; Cejna Manfred; Kawamoto Atsu; Hanley Allison; Symes James F; Asahara Takayuki; **Isner Jeffrey M**
AUTHOR ADDRESS: (a)St Elizabeth's Med Ctr, Tufts Univ of Med, Boston, MA** USA
JOURNAL: Circulation 104 (17 Supplement):pII584 October 23, 2001
MEDIUM: print
CONFERENCE/MEETING: Scientific Sessions 2001 of the American Heart Association Anaheim, California, USA November 11-14, 2001
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/8 (Item 8 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

(c) 2002 BIOSIS. All rts. reserv.

13634964 BIOSIS NO.: 200200263785
Statin therapy accelerates re-endothelialization by mobilization and incorporation of bone-marrow derived **endothelial progenitor** cells.
AUTHOR: Walter Dirk H(a); Rittig Kilian(a); Bahlmann Ferdinand H(a); Kirchmair Rudolf(a); Silver Marcy(a); Murayama Toshinori(a); Nishimura Hiromi(a); Asahara Takayuki(a); **Isner Jeffrey M**(a
AUTHOR ADDRESS: (a)St Elizabeth's Med Ctr, Boston, MA**USA
JOURNAL: Circulation 104 (17 Supplement):pII156 October 23, 2001
MEDIUM: print
CONFERENCE/MEETING: Scientific Sessions 2001 of the American Heart Association Anaheim, California, USA November 11-14, 2001
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2002 BIOSIS. All rts. reserv.

13634246 BIOSIS NO.: 200200263067
Human telomerase reverse transcriptase gene transfer modulates **endothelial progenitor** cell signaling, differentiation, and survival in vitro, and neovascularization in vivo.
AUTHOR: Murasawa Satoshi(a); Llevadot Joan(a); Silver Marcy(a); **Isner Jeffrey M**; Asahara Takayuki
AUTHOR ADDRESS: (a)St Elizabeth's Med Ctr, Tufts Univ Sch of Med, Brighton, MA**USA
JOURNAL: Circulation 104 (17 Supplement):pII6 October 23, 2001
MEDIUM: print
CONFERENCE/MEETING: Scientific Sessions 2001 of the American Heart Association Anaheim, California, USA November 11-14, 2001
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/10 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2002 BIOSIS. All rts. reserv.

13558329 BIOSIS NO.: 200200187150
Endothelial progenitor cell vascular **endothelial** growth factor gene transfer for vascular regeneration.
AUTHOR: Iwaguro Hideki; Yamaguchi Jun-ichi; Kalka Christoph; Murasawa Satoshi; Masuda Haruchika; Hayashi Shin-ichiro; Silver Marcy; Li Tong; **Isner Jeffrey M**; Asahara Takayuki(a
AUTHOR ADDRESS: (a)St Elizabeth's Medical Center, 736 Cambridge St, Boston, MA, 02135**USA E-Mail: asa777@aol.com
JOURNAL: Circulation 105 (6):p732-738 February 12, 2002
MEDIUM: print
ISSN: 0009-7322
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

7/3/11 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2002 BIOSIS. All rts. reserv.

13211656 BIOSIS NO.: 200100418805
HMG-CoA reductase inhibitor mobilizes bone marrow-derived **endothelial progenitor** cells.
AUTHOR: Llevadot Joan; Murasawa Satoshi; Kureishi Yasuko; Uchida Shigeki; Masuda Haruchika; Kawamoto Atsuhiko; Walsh Kenneth; **Isner Jeffrey M** (a); Asahara Takayuki
AUTHOR ADDRESS: (a)St. Elizabeth's Medical Center, 736 Cambridge Street, Boston, MA, 02135: vejeff@aol.com**USA
JOURNAL: Journal of Clinical Investigation 108 (3):p399-405 August, 2001
MEDIUM: print
ISSN: 0021-9738
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/12 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13000081 BIOSIS NO.: 200100207230
Vascular **endothelial** growth factor (VEGF) gene introduction as the promissing strategy in therapeutic postnatal neovascularization for ischemic tissue.
AUTHOR: Saito Eiko(a); Iwaguro Hideki(a); Tanaka Etsurou(a); Ando Kiyoshi (a); Nakazawa Hiroe(a); **Isner Jeffrey M**; Asahara Takayuki; Mori Hidezo(a
AUTHOR ADDRESS: (a)Depts. of Physiology, Genetic Engineering and Cell Transplantation, Tokai Univ. Sch. of Medicine, Kanagawa, 259-1193**Japan
JOURNAL: Japanese Journal of Pharmacology 85 (Supplement 1):p64P 2001
MEDIUM: print
CONFERENCE/MEETING: 74th Annual Meeting of the Japanese Pharmacological Society Yokohama, Japan March 21-23, 2001
SPONSOR: Japanese Pharmacological Society
ISSN: 0021-5198
RECORD TYPE: Citation
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/13 (Item 13 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12955710 BIOSIS NO.: 200100162859
Therapeutic angiogenesis for ischemic cardiovascular disease.
AUTHOR: Freedman Saul Benedict; **Isner Jeffrey M**(a
AUTHOR ADDRESS: (a)St. Elizabeth's Medical Center, 736 Cambridge St., Boston, MA, 02135: VeJeff@aol.com**USA
JOURNAL: Journal of Molecular and Cellular Cardiology 33 (3):p379-393 March, 2001
MEDIUM: print
ISSN: 0022-2828
DOCUMENT TYPE: Literature Review
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/14 (Item 14 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12917157 BIOSIS NO.: 200100124306
Therapeutic potential of ex vivo expanded **endothelial progenitor** cells for myocardial ischemia.
AUTHOR: Kawamoto Atsuhiko; Gwon Heon-Cheol; Iwaguro Hideki; Yamaguchi Jun-Ichi; Uchida Shigeki; Masuda Haruchika; Silver Marcy; Ma Hong; Kearney Marianne; **Isner Jeffrey M**(a); Asahara Takayuki(a
AUTHOR ADDRESS: (a)St Elizabeth's Medical Center, 736 Cambridge Street, Boston, MA, 02135: VeJeff@aol.com**USA
JOURNAL: Circulation 103 (5):p634-637 February 6, 2001
MEDIUM: print
ISSN: 0009-7322
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/15 (Item 15 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12904937 BIOSIS NO.: 200100112086
Hypercholesterolemia stimulates **endothelial progenitor** cell kinetics but impairs their functional properties.
AUTHOR: Kalka Christoph(a); Masuda Haruchika(a); Wolf Nicole(a); Asahara Takayuki(a); **Isner Jeffrey M**(a
AUTHOR ADDRESS: (a)St Elizabeth's Medical Ctr, Boston, MA**USA
JOURNAL: Circulation 102 (18 Supplement):pII64 October 31, 2000
MEDIUM: print
CONFERENCE/MEETING: Abstracts from Scientific Sessions 2000 New Orleans, Louisiana, USA November 12-15, 2000
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/16 (Item 16 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12895386 BIOSIS NO.: 200100102535
Differentiation of a mouse embryonic **stem** cell line into functional **endothelial** cells.
AUTHOR: Kearney Marianne(a); Masuda Harry(a); Asahara Takayuki(a); Tritman Neil(a); Ma Hong(a); **Isner Jeffrey M**(a
AUTHOR ADDRESS: (a)St Elizabeth's Medical Ctr, Boston, MA**USA
JOURNAL: Circulation 102 (18 Supplement):pII52 October 31, 2000
MEDIUM: print
CONFERENCE/MEETING: Abstracts from Scientific Sessions 2000 New Orleans, Louisiana, USA November 12-15, 2000
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/17 (Item 17 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12861436 BIOSIS NO.: 200100068585
Transplantation of ex vivo expanded **endothelial progenitor** cells for myocardial neovascularization.

AUTHOR: Kawamoto Atsuhiko(a); Gwon Hyeon-Cheol(a); Iwaguro Hideki(a); Masuda Haruchika(a); Hayashi Shin-Ichiro(a); Kalka Christoph(a); Wolf Nicole(a); Muskiewicz Kristina(a); Ma Hong(a); Kearney Marianne(a); **Isner Jeffrey M**(a); Asahara Takayuki(a
AUTHOR ADDRESS: (a)St Elizabeth's Medical Ctr, Boston, MA**USA
JOURNAL: Circulation 102 (18 Supplement):pII5 October 31, 2000
MEDIUM: print
CONFERENCE/MEETING: Abstracts from Scientific Sessions 2000 New Orleans, Louisiana, USA November 12-15, 2000
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/18 (Item 18 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12763781 BIOSIS NO.: 200000517404
Angiogenesis and vasculogenesis. Therapeutic approaches for stimulation of post-natal neovascularization.
AUTHOR: Kalka Christoph(a); Asahara Takayuki; Krone Wilhelm; **Isner Jeffrey M**
AUTHOR ADDRESS: (a)Cardiovascular Research, St. Elizabeth's Medical Center, 736 Cambridge Street, Boston, MA, 02135**USA
JOURNAL: Herz 25 (6):p611-622 September, 2000
MEDIUM: print
ISSN: 0340-9937
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: German; Non-English
SUMMARY LANGUAGE: English; German

7/3/19 (Item 19 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12559539 BIOSIS NO.: 200000313041
Vascular **endothelial** growth factor165 gene transfer augments circulating **endothelial progenitor** cells in human subjects.
AUTHOR: Kalka Christoph; Masuda Haruchik; Takahashi Tomono; Gordon Rebecc; Tepper Oren; Gravereaux Edwin; Pieczek Ann; Iwaguro Hideki; Hayashi Shin-Ichiro; **Isner Jeffrey M**; Asahara Takayuki
AUTHOR ADDRESS: (a)St. Elizabeth's Medical Center, 736 Cambridge St, Boston, MA, 02135**USA
JOURNAL: Circulation Research 86 (12):p1198-1202 June 23, 2000
MEDIUM: print
ISSN: 0009-7330
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/20 (Item 20 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12534456 BIOSIS NO.: 200000287958
Methods for enhancing angiogenesis with **endothelial progenitor** cells.
AUTHOR: **Isner Jeffrey M**(a); Asahara Takayuki

AUTHOR ADDRESS: (a)Arlington, MA**USA
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1228 (2):pNo pagination Nov. 9, 1999
MEDIUM: e-file.
ISSN: 0098-1133
DOCUMENT TYPE: Patent
RECORD TYPE: Abstract
LANGUAGE: English

7/3/21 (Item 21 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12447047 BIOSIS NO.: 200000200549
Transplantation of ex vivo expanded **endothelial progenitor** cells for therapeutic neovascularization.
AUTHOR: Kalka Christoph; Masuda Haruchika; Takahashi Tomono; Kalka-Moll Wiltrud M; Silver Marcy; Kearney Marianne; Li Tong; **Isner Jeffrey M** (a); Asahara Takayuki(a
AUTHOR ADDRESS: (a)St. Elizabeth's Medical Center, 736 Cambridge Street, Boston, MA, 02135**USA
JOURNAL: Proceedings of the National Academy of Sciences of the United States of America 97 (7):p3422-3427 March 28, 2000
ISSN: 0027-8424
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/22 (Item 22 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12271362 BIOSIS NO.: 200000024864
Regulatory role of estrogen on **endothelial progenitor** cell kinetics for cyclic endometrial neovascularization.
AUTHOR: Masuda Haruchika(a); Kalka Christoph(a); Takahashi Tomono(a); Iwaguro Hideki(a); Hayashi Shinichiro(a); Silver Marcy(a); Chen Donghui (a); Ma Hong(a); Kearney Marianne(a); Losordo Douglas W(a); **Isner Jeffrey M**(a); Asahara Takayuki(a
AUTHOR ADDRESS: (a)St Elizabeth's Med Ctr, Boston, MA**USA
JOURNAL: Circulation 110 (18 SUPPL.):pI475 Nov. 2, 1999
CONFERENCE/MEETING: 72nd Scientific Sessions of the American Heart Association Atlanta, Georgia, USA November 7-10, 1999
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/23 (Item 23 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12229555 BIOSIS NO.: 199900524404
A novel function for VEGF: Mobilization of bone marrow-derived **endothelial progenitor**.
AUTHOR: Asahara Takayuki; Takahashi Tomono; Kalka Christoph; Masuda Haruchika; Chen Donghui; Silver Marcy; **Isner Jeffrey M**
AUTHOR ADDRESS: St. Elizabeth's Med. Cent., Boston, MA**USA
JOURNAL: Circulation 98 (17 SUPPL.):pI605 Oct. 27, 1998
CONFERENCE/MEETING: 71st Scientific Sessions of the American Heart Association Dallas, Texas, USA November 8-11, 1998

SPONSOR: The American Heart Association
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/24 (Item 24 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12228537 BIOSIS NO.: 199900523386
Contribution of **endothelial progenitor** cells to neovascularization (vasculogenesis) is impaired with aging.
AUTHOR: Rivard Alain; Asahara Takayuki; Takahashi Tomono; Chen Donghui; **Isner Jeffrey M**
AUTHOR ADDRESS: St. Elizabeth's Med. Ctr., Boston, MA**USA
JOURNAL: Circulation 98 (17 SUPPL.):pI39 Oct. 27, 1998
CONFERENCE/MEETING: 71st Scientific Sessions of the American Heart Association Dallas, Texas, USA November 8-11, 1998
SPONSOR: The American Heart Association
ISSN: 0009-7322
RECORD TYPE: Citation
LANGUAGE: English

7/3/25 (Item 25 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12149694 BIOSIS NO.: 199900444543
VEGF contributes to postnatal neovascularization by mobilizing bone marrow-derived **endothelial progenitor** cells.
AUTHOR: Asahara Takayuki(a); Takahashi Tomono; Masuda Haruchika; Kalka Christoph; Chen Donghui; Iwaguro Hideki; Inai Yoko; Silver Marcy; **Isner Jeffrey M**(a
AUTHOR ADDRESS: (a)Departments of Medicine (Cardiology) and Biomedical Research, St Elizabeth's Medical Center, Tufts University School of Medicine, 736 Cambridge Street, Boston, MA, 02135**USA
JOURNAL: EMBO (European Molecular Biology Organization) Journal 18 (14):p 3964-3972 July 15, 1999
ISSN: 0261-4189
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/26 (Item 26 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12121188 BIOSIS NO.: 199900416037
Bone marrow origin of **endothelial progenitor** cells responsible for postnatal vasculogenesis in physiological and pathological neovascularization.
AUTHOR: Asahara Takayuki(a); Masuda Haruchika; Takahashi Tomono; Kalka Christoph; Pastore Christopher; Silver Marcy; Kearne Marianne; Magner Meredith; **Isner Jeffrey M**(a
AUTHOR ADDRESS: (a)St Elizabeth's Medical Center, 736 Cambridge St, Boston, MA, 02135**USA
JOURNAL: Circulation Research 85 (3):p221-228 Aug. 6, 1999
ISSN: 0009-7330
DOCUMENT TYPE: Article
RECORD TYPE: Abstract

LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/27 (Item 27 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11981239 BIOSIS NO.: 199900234552
Ischemia- and cytokine-induced mobilization of bone marrow-derived **endothelial progenitor** cells for neovascularization.
AUTHOR: Takahashi Tomono; Kalka Christoph; Masuda Haruchika; Chen Donghui; Silver Marcy; Kearney Marianne; Magner Meredith; **Isner Jeffrey M**(a); Asahara Takayuki(a
AUTHOR ADDRESS: (a)Departments of Medicine (Cardiology) and Biomedical Research, St. Elizabeth's Medical Center, Tu**USA
JOURNAL: Nature Medicine 5 (4):p434-438 April, 1999
ISSN: 1078-8956
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

7/3/28 (Item 28 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

10830378 BIOSIS NO.: 199799451523
Isolation of putative **progenitor endothelial** cells for angiogenesis.
AUTHOR: Asahara Takayuki; Murohara Toyoaki; Sullivan Alison; Silver Marcy; Van Der Zee Rien; Li Tong; Witzenbichler Bernhard; Schatteman Gina; **Isner Jeffrey M**(a
AUTHOR ADDRESS: (a)Dep. Biomed. Res., St. Elizabeth's Med. Center, Tufts Univ. Sch. Med., 736 Cambridge St., Boston**USA
JOURNAL: Science (Washington D C) 275 (5302):p964-967 1997
ISSN: 0036-8075
RECORD TYPE: Abstract
LANGUAGE: English

7/3/29 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

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Endothelial progenitor cells for vascular regeneration.
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